REMARKS

The present continuation application is a continuation of Application Serial No. 09/675,496. This parent application was under a final rejection by an Office Action mailed October 3, 2003. This continuation application is submitted for the purpose of submitting amended claims, five new claims (claims 20-24) and presenting arguments why claims 1-24 as set forth herein are allowable over the primary references applied in the above-referenced final Office Action, namely Cook, WO 97/12175 and Murphy, U.S. Patent No. 5,526,994.

Applicant hereby calls to the Examiner's attention co-pending U.S. Patent Application Serial No. 10/182,884, "Fibre-Reinforced Pressure Vessel and Method of Manufacturing Fibre-Reinforced Pressure Vessel" having the same inventors and claiming priority from the same priority document.

New claim 1 recites a fibre-reinforced pressure vessel comprising one of a rigid gas- or fluid-tight body overwound with fibre filaments. The fibre-reinforced pressure vessel has no matrix material preventing movement of the fibre filaments with respect to one another and the fibre filaments are wound such that when the pressure vessel is under internal pressure, the fibre filaments are loaded exactly in their longitudinal direction. In addition, the fibre filaments are wound such that the rigid body does not substantially contribute to the absorption of any mechanical stresses resulting from the internal pressure.

Independent claim 19 is directed toward a method of manufacturing a fibre-reinforced pressure vessel comprising one of a rigid gas- or fluid-tight body overwound with fibre filaments. The method includes the steps of providing one of a rigid gas- or fluid-tight body, fibre filaments and a winding apparatus and overwinding the rigid body with the fibre such that when the pressure vessel is under internal pressure the fibre filaments are loaded exactly in their longitudinal direction and the rigid body does not substantially contribute to the absorption of mechanical stresses resulting from the internal pressure.

Finally, independent claim 22 is directed to a fibre-reinforced pressure vessel including one of a rigid gas- or fluid-tight body and fibre filaments overwinding the body. The fibre filaments are arranged over the body such that when the pressure vessel is under internal pressure the fibre elements support substantially all the mechanical stresses resulting from the internal pressure.

Cook is believed not to anticipate or render obvious any of the independent claims in their current form. Contrary to the claims as now amended, which provide that the fibre filaments are wound to prevent the rigid body from substantially contributing to the absorption of

mechanical stresses resulting from internal pressure, Cook requires the use of a metallic toroidal shell overwound with fibres with the metallic shell bearing about one half the meridian load while the fibres bear only one half the load. Thus, by requiring a structural liner and further requiring that the structural liner bear approximately one half the mechanical stresses resulting from the internal pressure, Cook neither teaches nor suggests the combination of elements recited in independent claims 1, 19 and 22.

Murphy is directed to a filament-wound isotensoidal pressure vessel, but Murphy similarly fails to teach or suggest the unique combination of elements recited in independent claims 1, 19 and 22. First, Murphy does not expressly state that his disclosure does not include a matrix material. As set forth in the attached declaration of Professor Adriaan Beukers, fibre wound pressure vessels in the timeframe when the Murphy patent issued included a fibre matrix material preventing the movement of fibre filaments relative to one another as a matter of course. Thus, one of skill in the art reading the Murphy patent would presume Murphy included such a matrix material. Furthermore, Murphy does not teach that its fibre windings are such that the rigid body does not substantially contribute to the absorption of mechanical stresses resulting from internal pressure. For this reason as well, neither Murphy alone or in combination with Cook teaches or suggests the invention recited in claims 1, 19 and 22.

For the reasons set forth above, Applicant respectfully submits the claims as amended are allowable over the art of record and reconsideration and issuance of a notice of allowance are respectfully requested. If it would be helpful to obtain favorable consideration of this case, the Examiner is encouraged to call and discuss this case with the undersigned.

This constitutes a request for any needed extension of time and an authorization to charge all fees therefore to deposit account No. 19-5117 if not otherwise specifically requested. The undersigned hereby authorizes the charge of any required fees not included or any deficiency of fees submitted herewith to be charged to deposit account No. 19-5117.

Respectfully submitted,

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